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Like to be spooked? You can thank your amygdala. That feeling of being scared stems from our natural “fight or flight” response.

Think caveman, confronted by a saber-tooth tiger. Our primeval response is to either attack with fury or flee like the wind. The human body is designed to be prepared physiologically for either option. The amygdala, a small almond-shaped collection of cells nestled deep inside the brain, controls the cascade of changes that happen in seconds when we face a scare. About 30 different hormones are released to prepare us for action:

- We breathe rapidly to put more oxygen into our lungs;
- The heart beats faster to move that extra oxygen to the brain and muscles;
- Insulin production is slowed to raise the blood sugar, providing more energy;
- Blood pressure rises to push blood into the vital areas needed for survival;
- Beads of sweat form to help cool off the body in case we’re overheated;
- Blood vessels dilate so more blood can flow to major muscles of the arms and legs, leaving the skin cool, pale and clammy;
- Pupils dilate for better eye sight, especially if the lights are low;
- Blood is drained from our digestive organs and shunted to the muscles. That may make us nauseated;
- Embarrassingly, we may lose bladder or bowel control, but that’s to empty out anything that would distract us from action (remember, the caveman didn’t worry about soiled clothes). Some argue that this also sets up a diversion of scents that may befuddle our attacker;
- We uncontrollably shriek to threaten the enemy with our own scare tactic; and
- Endorphins are released to heighten our awareness. This is often accompanied by the feeling of pleasure which explains why we like to be scared.

With our bodies on full alert, whether predator or prey, we’re ready.

All this is controlled within the amazing nut-sized amygdala, but that’s only half the fun. There are two pathways for information traveling through the organ; one quickly signals the fight or flight response. The other pathway, triggered simultaneously, more slowly provides feedback to the brain about the origin of the disturbance. While we immediately prepare for action, this second pathway may soon counteract our fears, reminding us “it’s only a movie” and calling off the alarms.

The plot thickens regarding theories on differences between the right and left side of the amygdala. Studies suggest the right side triggers taking action, and the left side conducts more thoughtful responses. When scared, men are more likely to function from the right, responding physically to the stress. Women more often respond from the left side, still scared but less physical. We’re learning that many psychiatric disorders may have their origins in the amygdala. People with anxiety disorders have a smaller left amygdala, and individuals with depression may have a larger, or at least an overactive, left amygdala.

Enjoy a fright-filled Halloween if that’s how you’re wired. If you like the scares and can calm back down, thank your amygdala for handling it so well.